normal frequency, then it becomes accelerated and the arterial pressure is reduced. A little later the pulse becomes irregular, and presents now and then periods of slowing, which correspond with attacks of epileptiform convulsions. This intermittent slowing of the cardiac pulsations seems to be dependent upon a strong irritation of the vagi, for if we divide the vagi during an attack the pulse becomes at once very rapid and preserves its frequency till death. Other experiments also show that it is through the vagi that the influence of the emetic is transmitted to the heart. We know that atropine suspends the action of the pneumogastrics on the heart, and therefore in atropinized animals which we subsequently put under the influence of the emetic, we find no modification of the cardiac rhythm.

III. When we open, soon after death, the animals that have succumbed to poisoning by tartar emetic, we find the mucous membrane of the stomach, the duodenum and the liver strongly congested. These organs often present a violaceous tint like that of wine lees, and the cavities of the stomach and the intestine contain a great quantity of mucous and serous liquid. The author thinks that these phenomena of congestion and hypersecretion are the result of the irritation of the vaso-dilator filaments of the pneumogastric. In fact, in dogs, in which he previously divided the vagi, poisoning by tartar emetic did not cause this considerable hyperæmia of the abdominal organs. In these animals the mucous membrane of the stomach aud the intestines were pale or slightly rosy, and the secretion of mucous and serosity either was wanting or existed only in a very slight degree.

CYCLAMIN. Dr. Vincenzo Chirone *La Clinica*, Nov., 1875. (Abstr. in *Revue des Sciences Medicales.*)

The most important symptom and the most constant one produced by cyclamin, is stupor. The animal affected by this substance is not paralyzed, but is rendered stupid; it remains immovable, the head pendant and resting on the soil, respiration and circulation normal, sensibility preserved, often even exaggerated; sometimes we observe an attack of tremor of the members. Cyclamin seems to act first on the cerebral centres (stupor), then on the spinal centres (exaggeration of reflex action, hyperæsthesia, convulsions). Its action on the nervous system is probably secondary to a rapid and profound alteration of the blood.

ACTIVE PRINCIPLES OF MAIS AVARIA. M. Lombroso gives the chemical detail of the mode of extraction of certain poisonous principles he has obtained from the *Mais Avaria.* One was a bitter red substance obtained from tincture, soluble in potash and ether; it caused death when administered to frogs and pigeons, by producing convulsions and clonic spasms. Another mode of preparing the tincture gave a substance that either caused tetanus in the course of four to seven hours, the animals previously exhibiting hyperæsthesia, or sometimes a kind of ataxia, which appeared to be due to another substance.

When administered to fowls in doses of 4 to 12 grammes, for three months, it caused clonic movements. On treating the maize that had already been exhausted by alcohol, a third substance was obtained, which in its general odor, aspect and taste, resembled ergotin. This third substance when injected into frogs, caused dyschromia, narcotism, and paralysis of the legs, especially of the right side. The frogs could still swim but they could not preserve their horizontal position; when placed on the table they could not recover themselves. Chronic convulsion of tho posterior limbs then occur. The pulsations of the heart are slowed, and death follows in four hours. When given to cats it causes vomiting, then paralysis with clonic spasms of the feet and muzzle. Death takes place in an hour, or an hour and a half. In dogs, when administered by the stomach, paresis of the feet is produced. The animal is unable to leap, and when irritated it falls forward on the nose, at a later period spasms occur in the hind feet; if compelled to walk about it falls on one side; it cannot support itself on its forepaws. Mydriasis exists. The temperature falls to 31° C. and the respiration is rendered slower. These symptoms, M. Lombroso thinks, explain the different phenomena of pellagra, and especially that form to which belongs trismus, opisthotonos, paralysis of the legs, with clonic convulsions, and disorders of sensation, as that of a chord passing around the medulla, occur. He has employed the extract in solution in oil, in various inveterate diseases of the skin, as eczema, and psoriasis. *Gaz. Méd de Paris* (*Practitioner*, March, 1876.)

THE HYPODERMIC INJECTION OF MORPHIA IN INSANITY.—Dr. Jno. M. Diarmid, *Jour. of Mental Science*, April, 1876, at the close of a rather lengthy article, offers the following conclusions, as the result of his observations and experiments:

1. Of all single drugs, opium, or its alkaloid morphia, is the most potent and reliable hypnotic and sedative in the treatment of insanity.
2. Morphia, administered sub-cutaneously, is more rapid in its action and more powerful in its effects, than when given by the mouth.
3. By hypodermic injection, not only irregularity in action dependent on gastric conditions, but digestive disorders incident to the stomachic exhibition of morphia, are avoided.
4. The sub-cutaneous, is the easiest method of giving opiates where a patient refuses to take medicine, and always the most exact.
5. Of various adjuncts to opiates, warm baths are the most useful.
6. Attacks of acute and recurrent mania, and paroxysms of excitement in chronic mania and dementiæ, may be cut short in the outset, or beneficially controlled, by morphia sub-cutaneously administered.